Amendments to the Claims:

1-26. (Canceled)

27. (Currently Amended) A method of visually detecting a single copy of the Her-2/neu gene in chromosomal DNA in an intact cell in a tissue sample using brightfield microscopy, comprising:

heating the tissue ~~or cell~~ sample sufficiently to dissociate the native chromosomal target strands of Her-2/neu DNA;

enzymatically digesting the tissue in the tissue sample;

contacting ~~said~~ the tissue ~~or cell~~ sample with a digoxigenin-labeled nucleic acid Her-2/neu probe specific for the Her-2/neu gene under conditions that allow the re-hybridization of the labeled nucleic acid Her-2/neu probe and target strands of Her-2/neu DNA to form a target-probe duplex;

contacting the target-probe duplex with an anti-digoxigenin antibody under conditions allowing the antibody to bind to the label;

contacting the anti-digoxigenin antibody with an enzyme and a chromogen composition under conditions allowing the development of a visually detectable chromogen substrate signal at each target-probe duplex in the nucleus of the cell in the tissue sample separate and distinct from the chromogenic signals of other copies of the Her-2/neu gene ~~said chromosomal target nucleic acid sequence~~; and

detecting the chromogenic substrate signal visually using brightfield microscope conditions.

28. (Canceled)

29. (Previously presented) The method of claim 27 wherein the enzyme is selected from the group consisting of a phosphatase and a peroxidase.

30. (Previously presented) The method of claim 27 wherein the chromogen is selected from the group consisting of NBT/BCIP, tetramethylbenzidine and diamino benzidine.